CROP TALK

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Table of Contents

1. Wheat Nitrogen Strategies
2. Why Pre-plant Herbicides Are So Critical in Soybean Prodcution
3. Validating Sulphur Rates and Sources for Alfalfa in Ontario
4. Is Your Soil in Good Physical Shape?
5. Mob Grazing, Stocking Rate and Stock Density
6. Lystek—Introducing a New Organic Amendment
7. OSCIA Commitment to On-Farm Trials and Projects

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Wheat Nitrogen Strategies

by Peter Johnson, Cereal Specialist OMAF and MRA

Wheat yields pushing 150 bu/ac are very possible with good management and increased nitrogen (N) rates. Recent research clearly shows an interaction between fungicides and nitrogen. But high nitrogen rates immediately raises questions about lodging, nitrogen source, and application timing. Wheat's nitrogen demand is much earlier than corn, so nitrogen management needs to be different. What is the right rate, and are there any strategies that might help get those monster yields, without breaking the bank?

Rate Without Fungicides

90 lbs N/acre and full stop! You will never achieve big wheat yields under Ontario weather conditions without fungicides, so you might as well pull in your horns and let the real wheat growers pass you by.

Rate With Fungicides

120 lbs N/acre is the base rate. In over 50% of our trials, the most economic rate of nitrogen (MER-N) pushed very close to 150 lbs N/acre. However, 150 lbs/ac N added only a small increase to the bottom line, so if you are afraid of lodging, go slowly. Try just 2 or 3 strips in the field at 150 lbs/ac, with the balance at 120 lbs/ac, until you learn how to keep rates high and that there is more yield there, without having flat wheat.

Rates and Rotation

Wheat after peas or very early planted wheat with high plant populations should have lower N rates. Pea nitrogen releases perfectly for wheat, meaning that 60-90 lbs N/ac acts like 120-150 lbs N/ac. Early planted, thick wheat has higher lodging potential, and 120 lbs N/ac may make it go flat. Proceed with caution.

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Back to Top

Source
Trials over the past several years have shown little impact of N source on yield. 28% or 32% liquid sources have consistently shown a small (2.5 bu/ac) yield advantage over dry, due mostly to more even distribution.

ESN, Agrotain Plus®
ESN has shown no yield advantage in winter wheat, but has provided a boost in protein. Agrotain Plus® actually decreased yields when nitrogen applications were delayed by weather into mid-May. Agrotain Plus® may have a fit with early nitrogen applications, but should not be used on later timings. ESN has a fit as part of the nitrogen blend on hard wheat, but only when protein brings added value. The jury is still out on whether to buy these "protected" N products, or just spend the extra dollars on more nitrogen.

Sulphur
The need for sulphur (S) has not been as consistent as expected when the deficiency first showed in 2011. , When it occurs, the response stops at 10 lbs S/acre. To date, the best general recommendation is to add 10 lbs S/ac (40 lbs/ac ammonium sulphate or 3 gal/ac ammonium thiosul) as an "insurance" policy, and do trials on each farm to find responsive and non-responsive fields. There is no slam dunk that added sulphur will pay.

Single Applications
Time single applications for late-April. This avoids significant N loss concerns from wet soil conditions that might occur earlier, while providing N when the crop demand goes high. However, large single N applications increase lodging concerns.

Split Applications
Yield increases with split N applications have been seen, but are not consistent. Other considerations drive split N applications more than yield. Reduced concerns over N loss, better weed control from crop competition, more uniform heading and less lodging all accrue from split applications. Apply 50-80 lbs N/ac as early as possible (on frost), with the balance at the first to second node (May 10th).

Wheat is the most responsive crop to management that we grow. Added attention to detail will give higher yields. With good management it is possible to eliminate lodging yet achieve very high yields. Whatever strategy you chose, you will be rewarded according to the amount of effort you put into the crop. Manage the crop, and be a REAL wheat grower!

Why Pre-Plant Herbicides Are So Critical In Soybean Production

by Mike Cowbrough, Weed Specialist OMAF and MRA

If you grow soybeans and have Canada fleabane, common ragweed or giant ragweed growing in your fields, the use of pre-plant herbicide tank-mixes will be your best chance at achieving good control of these weeds. Management options for these three weeds are either limited or do not provide acceptable control once the soybean crop has emerged.

Why are these weeds so difficult to manage?
Populations of all three species exist in Ontario that are resistant to glyphosate. In addition there are also populations of Canada fleabane and giant ragweed resistant to FirstRate (cloransulam) and Classic (chlorimuron).

Canada Fleabane (also known as Mare's Tail and Horseweed) Table 1 Herbicide Control)

- Figures 1-3
- 12 Counties in Ontario have glyphosate resistant populations (Figure 4)
- 12% of confirmed glyphosate resistant sites in Ontario were also resistant to "group 2" herbicides (e.g. FirstRate) and occur in six counties (Figure 4).
- Tall plants (1.5 m (4'-6") or higher) can produce over 200,000 seeds
- Majority of seeds (~80%) will germinate upon dispersal.
- Seeds are air born and will move several hundred metres.
- Table 1—Herbicide Control

***Figure 1** - a small seedling fleabane plant shown in mid-September.*

I heard Sencor (metribuzin) was effective on fleabane. Why isn't it included in the Table 1?

The 600 g/acre rate of Sencor 75DF (metribuzin) provided exceptional control in Dr. Sikkema's trials. However, this is the highest label rate and can cause significant crop injury and yield loss if used on high risk soils (low organic matter, coarse textured). Efficacy of Canada fleabane with lower rates of metribuzin have not been evaluated in Ontario. However, Eubank et al., 2008 used the equivalent of 225 g/acre of Sencor 75DF and observed Canada fleabane control that ranged from 53-73%.

Figure 2 *- A Canada fleabane rosette in late-May. This is beyond the ideal stage to effectively manage with either herbicides or tillage.*

Figure 3 *- A 2 leaf giant ragweed seedling*

Giant Ragweed

- 7 Counties in Ontario have glyphosate resistant populations (Figure 5)
- 6% of confirmed glyphosate resistant sites in Ontario were also resistant to "group 2" herbicides (e.g. FirstRate) and occur in 3 counties. (Figure 5)
- Considered one of the most competitive species in Ontario.
- Female plants (seed producing) are wind pollinated by male plants.
- Wind born pollen can travel several kilometers.
- Figure 6
- Table 2 Herbicide Control

Figure 6 *- A giant ragweed plant past the ideal stage for control with a herbicide.*

Pre-plant management options for Canada fleabane:

Table 1: Visual control of glyphosate resistant Canada fleabane when herbicides with different modes of action were tank-mixed with glyphosate and applied prior to planting soybean.

Glyphosate tank-mix partner	Rate	% Control
Eragon + Merge	14.4 g + 0.5% v/v	98
FirstRate*	17 g/ac	95
Amitrol 240**	3.3 L/ac	93
2,4-D LV Ester 700**	0.32 L/ac	86
Liberty	1 L/ac	75

** populations of Canada fleabane are also resistant to this herbicide.*

***must be applied a minimum of 7 days prior to planting*

Data courtesy of Dr. Peter Sikkema, University of Guelph (Ridgetown Campus)

Pre-plant management options for giant ragweed:

Table 2: Visual control of glyphosate resistant giant ragweed when herbicides with different modes of action were tank-mixed with glyphosate and applied prior to planting soybean.

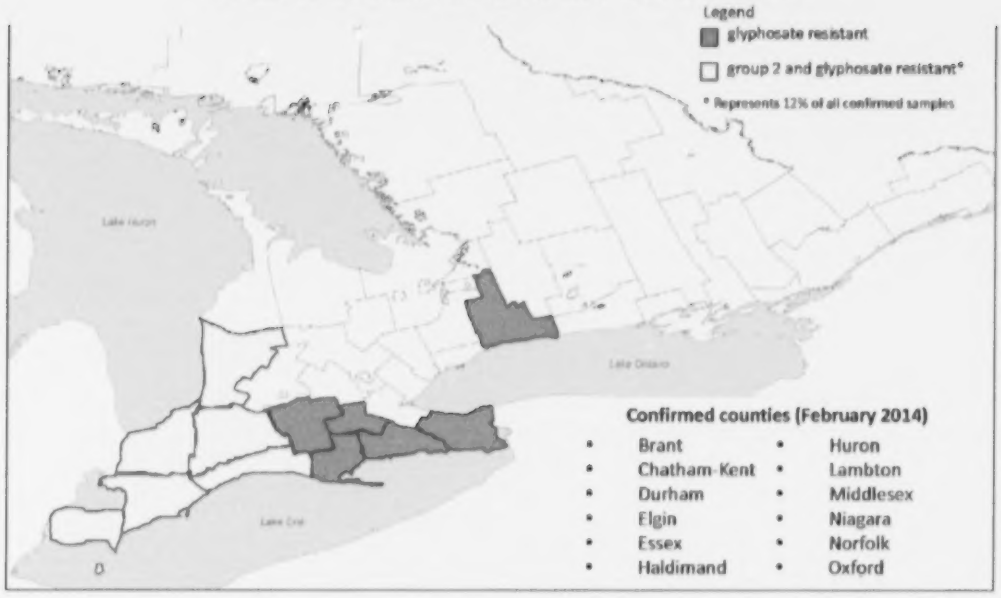
Glyphosate tank -mix partner	Rate	% Control
2,4-D LV Ester 700**	0.32 L/ac	96
Amitrol 240**	3.3 L/ac	91
Eragon + Merge	14.4 g + 0.5% v/v	87
FirstRate*	17 g/ac	84

Data courtesy of Dr. Peter Sikkema, University of Guelph (Ridgetown Campus) and is based on 7 studies, except FirstRate data which was based on 8 studies

** populations of giant ragweed are also resistant to this herbicide.*

***must be applied a minimum of 7 days prior to planting*

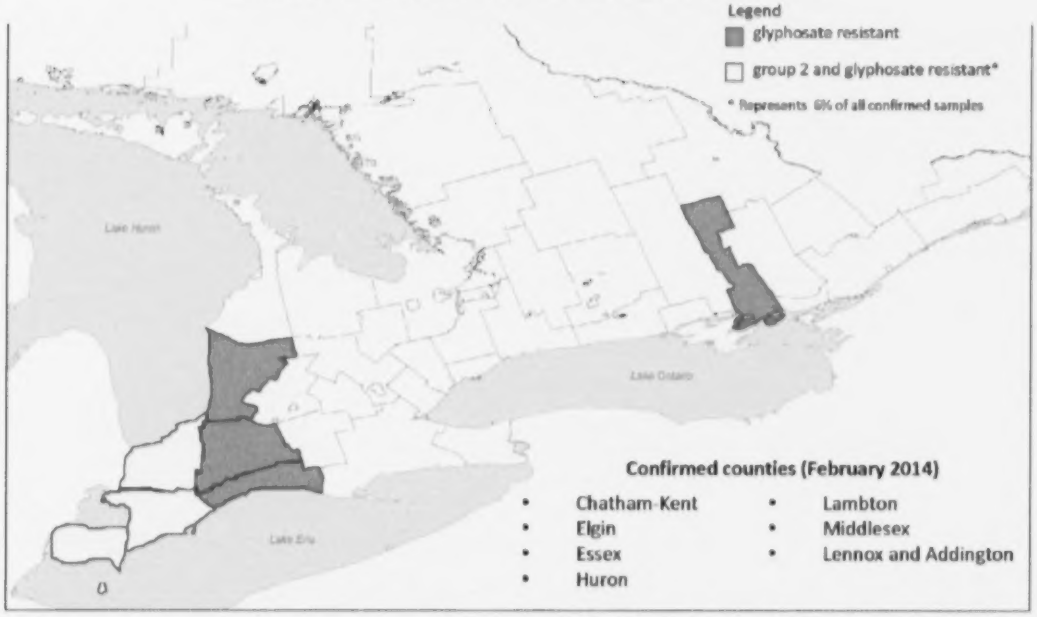
Herbicide resistant Canada fleabane occurrence in southern Ontario counties



Source: Dr. Peter Sikkema, University of Guelph
Prepared by: Mike Cowbrough, OMAF/MRA

***Figure 4** - Above **Figure 5** - Below*

Herbicide resistant giant ragweed occurrence in southern Ontario counties



Source: Dr. Peter Sikkema, University of Guelph
Prepared by: Mike Cowbrough, OMAF/MRA

ACKNOWLEDGEMENTS: *The research conducted by Dr. Sikkema's lab could not have been done without the assistance of Chris Kramer (research technician), and current and former graduate students Holly Byker, Laura Ford, Joanna Follings and Joe Vink. Funding for this project was provided by the Agricultural Adaptation Council, Monsanto Canada and the Grain Farmers of Ontario*

Validating Sulphur Rates and Sources for Alfalfa in Ontario

by Bonnie Ball, Soil Fertility Specialist & Brian Hall OMAF and MRA

***Figure 1** - Response of alfalfa to sulphur application /(100 lb S/ac elemental to right of stake)*

Alfalfa has the highest sulphur (S) requirements of any of the field crops. A 5 ton/ac crop of alfalfa removes about 25 lbs/ac of sulphur. By comparison, a 45 bu/ac spring canola crop, also a high user of sulphur, removes 15 lbs/ac. A 150 bu/ac corn crop removes 10 lbs/ac of sulphur.

In Ontario, sulphur deposition from acid rain has decreased steadily. The amount of S deposited has decreased by over 50% since 1990. Instances of S deficiency have also increased due to reductions in the organic matter pool, higher crop yields and higher protein yields. S deficiencies in alfalfa are more likely to occur on soils that have not had a manure application within 2 years.

S Tissue Testing In Alfalfa

There currently is not a reliable soil test for sulphur in Ontario. However, tissue testing of alfalfa (at late-bud stage) is considered a suitable diagnostic approach for determining sulphur deficiencies. The critical level below which alfalfa is considered S deficient and may benefit from applying sulphur is 0.25%. A 2012 field survey of Ontario alfalfa stands (Figure 2) indicated that 21% of fields had S- tissue analysis below this level. Put another way, 79% of these fields would have been unlikely to have an economic response to applying sulphur. It is also noteworthy that 37% of these fields tested below the critical K value of 1.7%.

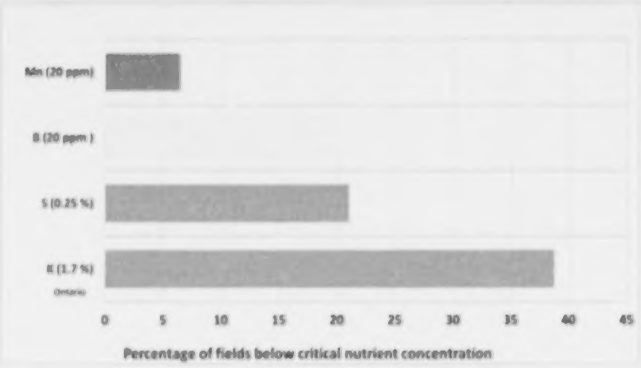


***Figure 2** - 2012 Tissue Sample Survey of Nutrient Deficiencies in Ontario Alfalfa Fields*

What Rate of S?

A general thumb rule for S application on alfalfa is 5 lb/ac per ton of dry matter yield. The University of Wisconsin recommends 15 – 25 lbs/ac of S in the sulphate broadcast on established stands, or 25 – 50 lbs/ac of elemental S incorporated at seeding. Research is required to verify these numbers in Ontario.

What Form of S?

What is the most economical source of S to use with alfalfa? The sulphur must be in the sulphate form to be usable by the plant. Sulphate fertilizers include:

- ammonium sulphate (21 - 0 – 0 – 24)
- potassium sulphate (0 – 0 – 50 – 18)
- sulphate of potash magnesia (aka Sul-Po-Mag, or K-Mag) (0 – 0 – 22 – 20)
- calcium sulphate (0 – 0 – 0 – 17)

Elemental sulphur, rather than sulphate, could be a good fit for forage stands, supplying a potentially cheaper S source over a longer period of time. Elemental S must be converted to sulphate by soil bacteria before plants can use it.

Elemental S consists of finely ground sulphur that has been pelletized. The sulphur content is often 80-90%, but less than 50% is considered available in the year of application. The remainder becomes slowly available.

Limited Ontario Research

Ontario research on sulphur rates, source or application timing for alfalfa has been limited. Results from 2012 research trials applying sulphate to alfalfa were mixed. Some sites showed no response to applying sulphur. However, one site showed a dramatic yield increase in an alfalfa-grass mix of 1.55 ton/ac (including increasing first-cut yield from 2.2 to 3.1 ton/ac). Crude protein increased 4 percentage points, with the percentage of alfalfa in the harvested forage improved from 33 to 56%.

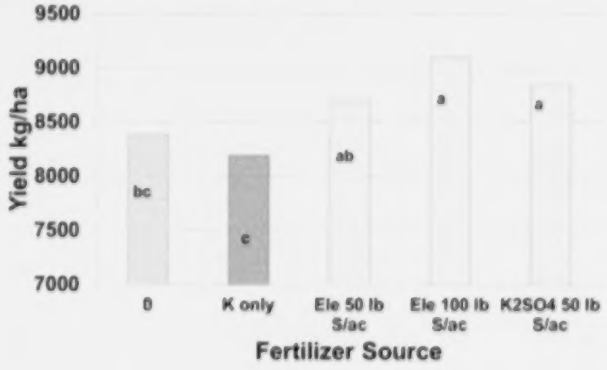
2013 Research Trials

A new field project was started in 2013 to look at the rates, timing and form of sulphur on alfalfa-grass yield and quality. Another goal was to refine tools for identifying S-responsive sites, using tissue and soil testing.

Three forage stands were selected where a positive yield response to S was anticipated based on low S-tissue analysis. Treatments included:

- no S
- 50 lbs/ac S fall-applied elemental S
- 100 lbs/ac S fall-applied elemental S
- 50 lbs/ac S spring-applied potassium sulphate (which also includes 142 lbs/ac K_20)
- no S + muriate of potash (which includes 142 lbs/ac K20)

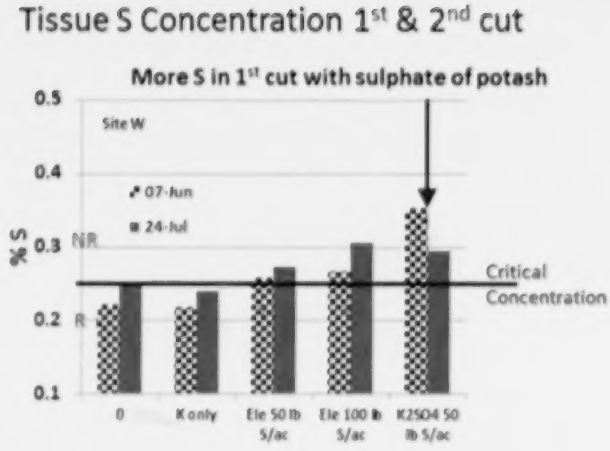
In these trials where we anticipated a S response, sulphur application improved forage yield an average of 9% (Figure 3). The yield response was greater in second-cut than first cut. The third-cut yield response was greater than first- or second-cut in a 3-cut system. There were no significant differences between sulphur sources (i.e. elemental S vs. sulphate of potash).



Note: to convert kg/ha to lbs/acre multiply by 0.9 (eg 8,000 kg/ha X 0.9 = 7,200 lb/ac)

Figure 3 *- Yield response (kg/ha) to Sulphur in 2013 Tirals on Responsive Sites*

These results verified the 0.25% S-tissue test threshold. Treatments without S remained below this level, while S application improved S-tissue concentrations. Figure 4 shows S-tissue concentration in first and second-cut. Sulphate rather than elemental-S had the highest S-tissue concentration in the first-cut, indicating more availability to the plant. Sulphur application did not improve crude protein. At 2 sites, % alfalfa in the alfalfa-grass mix was increased by 10%. Spring K application did not improve yield, even though soil tests indicated a requirement for potash.



Note: Tissue concentrations below line (0.25%) are considered low and responsive to S application

Figure 4 *- Tissue S concentration at Site W*

In 2013, elemental sulphur provided a similar yield increase to sulphate. It has been generally regarded that because of slow availability of elemental S that the product should be applied 12 to 18 months ahead of crop. The mild winter in 2012-2013 may have improved the S availability. These trials will be repeated in 2014-2015.

Acknowledgement: *Thanks to Greta Haupt, Shane McClure, Katie Walch, OMAF students, and John Lauzon, University of Guelph. Special thanks to the farmer co-operators. Financial support for the project: Heartland Regional Soil & Crop, Ontario Forage Council, Canadian Agricultural Adaptation Council. For more information on the research project, refer to "Crop Advances".*

Is Your Soil in Good Physical Shape?

by Adam Hayes, Soil Management Specialist OMAF and MRA

Soil health is broken down in to three components - physical, biological and chemical. Each component is important, but the physical component is one that can have a significant impact on yield. Soil physical aspects break down into two main areas:

- soil structure, including aggregate stability, and
- available water capacity.

Aggregate Stability

Aggregate stability is a measure of how well soil aggregates or clumps of soil stay together when they are subjected to a test with water or simulated rainfall. Soil aggregates with good stability will largely stay intact when exposed to the test. Soils with poor aggregate stability will breakdown into individual soil particles. (Figure 1).

So what are the implications of aggregate stability in the field? A soil with poor aggregate stability is prone to water erosion. When raindrops hit the soil the individual particles

are easily broken away and washed down the slope and potentially off the field. The same is true for wind erosion. Soil particles are more easily broken off and blown with the wind. Poor aggregate stability increases the incidence of crusting. The rain hits the soil surface breaking the aggregates apart and spreading them across the soil surface filling in the soil pores. When the soil dries, it is a solid layer that slows water movement into the soil and makes it difficult for the crop to emerge through. (Figure 2).

Soil structure refers to the way in which soil particles cling together to form aggregates. When individual soil particles are aggregated, they form larger, relatively stable primary structures. Structure also encompasses how soil particles are bound together and the spaces or pores in between. Structure has a significant effect on soil water properties and the ability of a soil to resist erosion. Good soil structure increases porosity, aeration, drainage and permits easier root penetration, all of which are important on soils with limited internal drainage, such as clays. Conversely, poor soil structure in the topsoil produces hard, massive clods, which makes a poor seedbed for germinating crops. Poor structure in the subsoil results in dense, compact properties which limit root and moisture penetration.

Clay particles tend to cling tightly together and resist separation more than sand particles. As organic matter decomposes to humus, a variety of compounds are released which "glue" soil particles together. Soil structure is formed through the actions of:

- drying and wetting or shrinking and swelling, this creates cracks and planes of weakness for roots
- freezing and thawing
- roots through the removal of water, root exudates or organic materials that bind soil particles and the formation of root channels
- soil animals like worms and beetles, moving soils, mixing and releasing organic materials
- microorganisms breaking down plant and animal residues
- tillage - reduces the size of aggregates, an artificial way of creating structure in some soils, generally not long lived.

Tillage

Tillage breaks down soil structure, so minimum tillage or no tillage is the best. Increasing organic matter in the soil through the use of manures, other organic materials such as compost, a diverse crop rotation and cover crops will improve soil structure.

Compaction

Soil compaction is a part of the soil profile that has poor structure. The compacted layer lacks good structure, making it difficult for roots to grow through, (Figure 3) and for air and water to move through. Taking measures to minimize compaction, such as keeping axel loads below 5 tons per axel, reducing traffic in the field, making sure the soil is fit and using radial tires and reduced tire pressure, will help prevent the problem.

Water Holding Capacity

Plant growth depends on the water stored in the soil. Available water capacity is a measure of the soil water that is available to the plant. Water is stored in the soil in the pores and in organic matter. Adding organic matter, such as manures and composts, is a good way to improve the water holding capacity of sandy soils.

Soil that is in good physical shape will have good soil structure. A well-structured soil will allow water to move through the soil, air to enter the soil, will not crust and favours good root growth. (Figure 4). Minimizing tillage and compaction, using a multi-crop rotation including cover crops and adding organic materials such as manure and composts, will greatly improve the structure of the soil.

***Figure 1** - Two similar sized aggregates were placed in these petri dishes of water for 5 minutes. The soil on the left has very good aggregate stability and the one on the right is poor.*

***Figure 2** - Soil crusting due to poor aggregate stability can impede emergence and significantly reduce crop stands.*

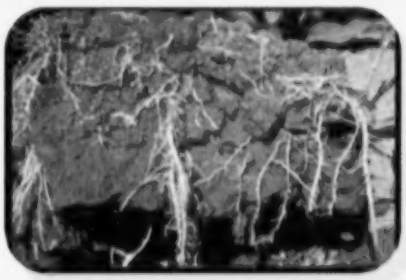


***Figure 3** - The roots went down until they hit the compacted layer and then went horizontal. The resulting shallow root system will suffer moisture stress during dry periods.*

***Figure 4** - A well-structured soil allows for easy rooting and water and air movement through the soil.*

Mob Grazing, Stocking Rate and Stock Density

by Jack Kyle, Grazier Specialist OMAF and MRA

When discussing pasture management, reference is often made to stocking rate and stock density, and sometimes you will hear the term "mob" grazing. Understanding these terms and how they relate to your grazing operation is important.

Stocking Rate
Stocking rate is the number of animals or animal units (standardized to 1000 lbs. of animal) per acre for the entire grazing season. If you have 50 animal units on a 75 acre pasture for the grazing season this would be a stocking rate of 50 / 75 = 0.66 animal units per acre.

Stock Density
Stock density is the number of animal units on an area at a point in time. Using the above example of 50 animal units on a 75 acre pasture, divided into 25 paddocks of 3 acres each, what is the stock density? The stock density on that 3 acre paddock when the animals are grazing it would be 50 / 3 = 16.66 animal units per acre, or 16,660 lbs of livestock per acre. If these same animal units were on 1 acre the density would be 50 / 1 = 50 animal units, or 50,000 lbs of animal per acre. It has been my observation that good quality pasture can support a 1 day stock density of about 1 lbs of animal per square foot, or 43,560 lbs of animal per acre for 1 day.

Mob Grazing
Popular grazing articles sometimes refer to high density "mob" grazing. In these scenarios the producer is looking at 200,000 to 1,000,000 lbs of animal/acre for a very short period – often about 1 - 2 hours, and then the animals are moved to another area. This is generally done on a pasture that has been neglected for years and needs to be rejuvenated, usually when the grasses have headed out. The high impact of the animals will tramp any uneaten vegetation into the soil, and cause some surface disturbance that will stimulate growth of seeds that are in the soil seed bank. After this high impact grazing lasting for only an hour or two, the area will not be grazed again for a significant length of time, generally a year. Mob grazing should be done when the soil is relatively dry and is best done with cows rather than younger animals.

Mob grazing is a method of renovating a paddock more than it is a grazing method. It is a way to renovate a neglected pasture without using a plow, cultivation and seed drill. It is the first step in renovating an overgrown, unproductive pasture so that you can include that paddock in a regular rotational grazing system. Remember a long rest and recovery period must follow a "mob" grazing impact.

Lystek—Introducing a New Organic Amendment

by Christine Brown, Nutrient Management Specialist OMAF and MRA

For crop producers looking for a balanced nutrient source that also contains some organic matter, a new bio-fertilizer source has been introduced. From a nutrient content it is similar to liquid hog manure and provides available N-P_2O_5-K_2O (in year of application) of about 30 – 27 – 31 lbs / 1000 gallons. It also contains micro-nutrients, including about 10 lbs of sulphur / 1,000 gallons, and about 5% organic matter.

What is Lystek?
Lystek is a processed liquid biosolid that is registered through the Canadian Food Inspection Agency (CFIA) and is treated as a commercial fertilizer product.

- pH of 9.5
- Patented process that combines sewage biosolids + potassium hydroxide + heat (70 °C) + a lysing process

- CFIA registered – pathogen free (no NMP or NSAM plan is required)
- 12 – 13 % dry matter (lysing process makes it more watery and less viscous than diary manure at the same DM content)
- About 30 – 27 - 31 lbs / 1,000 gal of available N-P_2O_5-K_2O in year of application (providing a fertilizer value without the value of micro-nutrients of over $ 50 / 1,000 gallons)
- **$12.50 / 1,000 gal delivered and applied**
- The main plant is in Dundalk, with facilities in Elora, Guelph, St Marys and Iroquois

The material is hauled and applied at a rate between 3,000 and 4,000 gal/ac. The ammonium-nitrogen content is high, so injection or immediate incorporation is important to avoid N loss through volatilization. The cost of application is included in the product price.

Where is the best fit for Lystek?
As with any nutrient or material that is similar to liquid manure, the best fit is when it is applied to a growing crop or just ahead of a growing crop. Lystek applied just ahead of, or into standing corn will provide the majority of required nutrients for the crop. When Lystek is applied after wheat harvest, a cover crop will help utilize the nutrients to avoid losses.

Although Lystek includes biosolids and has some organic matter, the processing of the material makes it different from livestock manure. The organic matter will provide carbon for soil organisms and will benefit soil health, especially when combined with a wheat or forage based rotation and/or cover crops. The heating and high pH does limit the microbial population in the Lystek. The material provides about 40 lbs of calcium / 1,000 gallons, but is not marketed as a liming source for low pH soils due to the buffering capacity of most soils.

Anyone interested in this material as part of a side-by-side comparison to regular fertilizer program is invited to participate in an OSCIA study (contact christine.brown1@ontario.ca).

For product information, contact Mike Dougherty, 519-923-3539 mdougherty@lystek.com

OSCIA Commitment to On Farm Trials and Projects

by Ian McDonald, Applied Research Coordinator OMAF and MRA

At the recent OSCIA Annual Meeting in London, a Round Table discussion explored the organization's involvement in on-farm trials and projects. The input and suggestions provided will assist the OSCIA executive and OMAF Field Crop staff to better meet the needs of members. The discussion by the 80 delegates was lively and engaging, and summarized as follows:

What has worked in the past and what hasn't?
Successful projects have clearly identified goals and provide good data on issues of interest. Project proposal submissions and review by the executive improved projects. Data analysis by OMAF staff is good, but more time is needed to do setup, monitoring and communication with cooperators. Reporting is good. Both good and bad project results should be communicated to give producers more information to formulate their own decisions.

Where do we go from here, how do we make it better?
There was concern that lack of technical support to set up, monitor and interpret data limits the value of project results. While costs have increased, grant values have not, with little compensation for farmers directly involved in field trials.

Does OSCIA have a mandate to do on-farm research?
It is well within the mandate of OSCIA to do on-farm research. Project involvement by members has pushed agricultural trends (hemp, no-till, biomass, GPS). Annual meeting delegates tend to be more involved in projects so there may be a bias. Increasing member participation in projects is challenging due to the time and cost involved without much recognition or compensation.

Have we had success with the current system?
Project success should be measured by the learnings. Knowledge provided helps farmers with their own decisions that lead to the opportunity to capture profit. Poor or unexpected results allow members to learn without a huge personal risk in exploring new opportunities. Local projects engage both members and non-members. Local projects are often the only ones that occur on less than ideal ground, such as clays and sands, as opposed to research station and company plots on better soils.

The partnership between local associations and OMAF staff in doing projects works well. However, more membership involvement in the projects is needed, rather than the same cooperators all the time. More funding is required. Farmers need to be empowered and supported by OSCIA.

Does the current grant system work and what could be changed?
There is concern about the lack of support from the federal government. The current funding approval system should be changed to be merit based. Having standard funding available to all counties and regions means some poor ideas or projects are being supported while other good ideas are left on the table. The system should be flexible to allow unallocated money from one area not fully utilized to be used in another category. Duration of projects should be explored to include 5 years projects rather than the current options of 1 or 3 years. One year projects and data may increase the chance of providing misleading results. Local projects are a good verification of research station results.

The number and variety of grant reports presented at the Annual Meeting suggest that the system is working, but could be improved. It was suggested the OSCIA explore how members could get federal or provincial tax credits for involvement in on-farm research projects. Although some suggested more involvement and support from industry, the independence from agri-business with OSCIA is seen as an advantage.

Where do project ideas come from?
Things are different today. In the past, there were more farmers with more time on their hands. More extension staff was available, so there was less need for the farmers themselves to do the project work. There is concern over the general lack of funding for agricultural research.

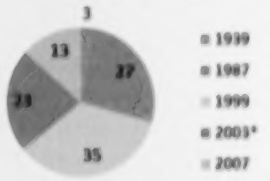
Project ideas come from local, director and agri-business meetings, and OMAF staff. Ideas come from conferences (such as SWAC, FarmSmart) and international travel. Local project are sometimes limited by the lack of equipment and technology available to cooperators.

How do we get member involvement in field projects?
Projects need to meet the interests of local farmers, and be done where equipment and resources are available, including knowledgeable people. There is a need for more local industry involvement since projects often explore new inputs or technologies that local business may benefit from selling.

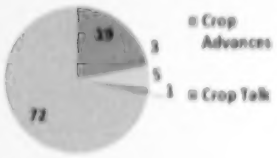
It is very important to ensure that members and participating cooperators receive local project reports. Local project results rolled up into large projects sometimes results in local information not getting reported. It is important to increase awareness and interest of local projects through tours and meetings.

Survey Results
Prior to the Round Table discussion, the delegates were asked a number of questions to set the stage for the discussion. The results are reported below. OSCIA through the posting of the individual and annual Crop Advances reports has a tremendous resource available to all. This is not being utilized by the membership and needs more communication of its availability and excellent content. The results are expressed on a percentage of response basis.

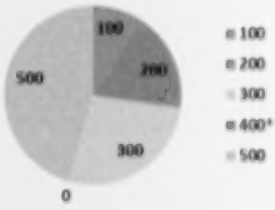
What Year did Crop Advances start to report OSCIA projects?



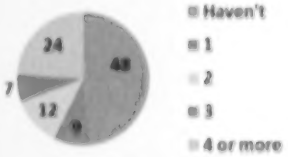
Where are OSCIA member projects reported?



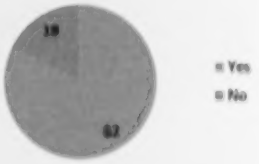
How many Crop Advances reports are available to you?



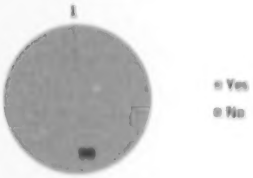
Per year, have you read online Crop Advance Reports?



Have you had direct participation in a Soil and Crop project?

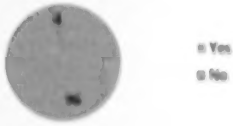


Should OSCIA continue to be involved in on farm field trials?



Are you open to direct involvement in Soil and Crop projects on your farm?

Have the results of OSCIA field trials or Crop Advances reports influenced your practices at home?



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